

# **CLASSIFICATION OF TWO-DIMENSIONAL REAL SUBALGEBRAS OF LIE ALGEBRA $M(2, \mathfrak{K})$**

*Pushmina N. S., Chernyh S. S., Sedaev A. A.*

We obtain basis families of two-dimensional complex matrices generating all two-dimensional non-similar real sub-algebras of four-dimension complex Lie algebra  $M(2, \mathfrak{K})$ . Description of all different Lie algebras is a useful tool of investigation of homogeneous manifolds. The present results will be used in description of affine-homogeneous real hyper-surfaces of the three-dimensional complex space.